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The social behavior of toddlers with special needs : a comparison in segregated and integrated early intervention programs

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Clayton, Carolyn, M.S.

San Jose State University, 1994

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**THE SOCIAL BEHAVIOR OF TODDLERS WITH SPECIAL NEEDS:
A COMPARISON IN SEGREGATED AND INTEGRATED
EARLY INTERVENTION PROGRAMS**

A Thesis

Presented to

**The Faculty of the Division of Health Professions
San Jose State University**

**In Partial Fulfillment
of the Requirements for the Degree
Master of Science**

by

Carolyn Clayton, M.Ed.

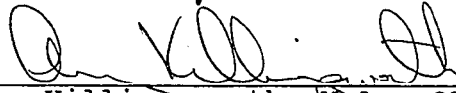
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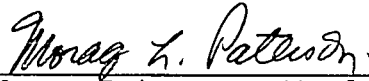
APPROVED FOR THE DEPARTMENT OF OCCUPATIONAL THERAPY



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ABSTRACT

THE SOCIAL BEHAVIOR OF TODDLERS WITH SPECIAL NEEDS: A COMPARISON IN SEGREGATED AND INTEGRATED EARLY INTERVENTION PROGRAMS

by Carolyn Clayton

This study examines the nature of social behavior of five toddlers with special needs in their segregated and integrated early intervention programs. Segregated classrooms consisted of toddlers with special needs with support from special educators. Integrated classrooms included typically developing toddlers who were integrated into the subjects' classrooms by reverse mainstreaming. The subjects were also pulled out of their segregated classrooms and integrated into regular classrooms.

The free play of the subjects in the segregated and integrated classrooms was video taped over a 15-week period. Observation schemes of peer-directed and self-directed response measures were subsequently developed and used to describe the nature of social behavior of the subjects in case studies.

The research questions are answered in terms of levels of social competence across classroom conditions. Results address the efficacy of promoting social integration among toddlers with different levels of social skill development.

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CHAPTER 1

INTRODUCTION

Purpose of the Study

The purpose of the study was to identify and describe the nature of social behavior of five toddlers with special needs toward other children who were in their segregated and integrated early intervention classrooms. A representation of the repertoire of social behavior and a clinical analysis of the social competence of each subject was derived from the data reported in individual case studies. Findings were applied to answer the research questions. Prominent themes were analyzed with regard to the patterns of social competence and profiles of social behavioral adaptation of the selected toddlers with special needs and applied to occupational therapy treatment practices in segregated and integrated early intervention settings.

Statement of the Problem

There is a great deal of recent evidence to show that young children with special needs demonstrate social skill deficits that infringe upon social development (Bracegirdle, 1990; Guralnick, 1992; Odom, McConnell, & McEvoy, 1992). This is an area of concern for early intervention specialists including occupational therapists.

Support from occupational therapists in the area of early intervention involves the provision of individual developmental evaluation and treatment for infants and toddlers with special needs. Occupational therapists also consult and coordinate with special educators to design and implement early intervention center-based programs for groups of infants and toddlers with special needs. These programs typically include segregated classrooms with only special needs children, and may include integration practices whereby children approximately 18-36 months of age with special needs and typically developing toddlers are brought together with the focus on social integration (Guralnick, 1981b; Peterson, 1982). An approach that is consistent with occupational therapy developmental frames of reference for clinical practice is focusing on the developmental processes and adaptive mechanisms of the child, including social adaptive functioning. Yet, research from the areas of occupational therapy and special education is deficient with regard to the social behavior of the toddler-age-group of children with special needs toward other children in early intervention settings (Brault, 1992). Since the literature does not provide adequate information concerning the social competence of toddler-age children with special needs when placed in the various social environments of segregated and integrated early

intervention classrooms, the nature of the social behavior of this population under these special circumstances is a pertinent topic of research. Research data gathered in these contexts are necessary for individual placement decisions and the design of programs that meet individual special needs.

Objectives and Research Questions

By observing the free play of five selected toddlers with special needs, an objective of this study was to identify and describe the nature of the social behavior of these children, in the contexts of early intervention programs involving segregated and integrated classrooms. Three research questions were derived from this objective:

1. What was the nature of the social behavior of toddlers with special needs toward other children who were in their segregated classrooms?
2. What was the nature of the social behavior of toddlers with special needs toward other children who were in their classrooms with integration by reverse mainstreaming?
3. What was the nature of the social behavior of toddlers with special needs toward other children who were in their classrooms with integration by pull-out?

Definitions

For the purpose of this study, the terms are defined as follows:

Age entered peer group. Age at which child was initially enrolled in the early intervention program (Howes, 1987).

Early intervention center-based program. Services provided to toddlers with special needs with support from occupational therapists and special education teachers, in which the needs of the child are addressed through special activities and a special environment, ongoing evaluation, and an individualized family service plan.

Entry free play. Part of the program of the segregated classrooms and classroom with integration by reverse mainstreaming, during which time participants entered the play group for the first time of the day and were encouraged to play freely in a specially arranged environment with support from special education and regular education teachers.

Equal developmental status. Children exhibiting skills in the major developmental domains (Gross Motor, Fine Motor, Cognitive, Social, and Language) that are approximately equal in age.

Free play. Part of the program of the segregated classrooms and classroom with integration by pull-out, during which time students were encouraged to play freely in a specially

arranged environment with support from special education and regular education teachers.

Integration by pull-out. The placement of toddlers with special needs into parts of programs of the regular classrooms of typically developing toddlers, with support from special education and regular education teachers.

Integration by reverse mainstreaming. The placement of typically developing toddlers into parts of programs of the special classrooms of toddlers with special needs, with support from special education and regular education teachers.

Group size. Number of children within a self-contained unit (classroom) in the center (Howes, 1987).

Regular classroom. Early childhood education program consisting of a self-contained unit of typically developing toddlers and supported by regular education teachers.

Segregated classroom. Early intervention center-based program consisting of a self-contained unit of toddlers with special needs of approximately equal developmental status and supported by special education teachers and occupational therapists.

Social behavior. Any behavior from one child, including visual, vocal, gestural, and physical behaviors, that appears to be directed toward another child. It may involve

a social bid or a response to the social invitation of another (Guralnick, 1992).

Time in group. Frequency (days per week) of time a subject spends in the peer group in which he/she is observed (Howes, 1987).

Toddlers with special needs. Children between the ages of 18-36 months with developmental delays or disabilities.

Typically developing toddlers. Children between the ages of 18-36 months exhibiting normal development.

Assumptions

It was assumed that:

1. The discrete visual, vocal, gestural and physical social behaviors, exhibited by the selected toddlers with special needs toward other children in the segregated classroom, could be identified and described.

2. The discrete visual, vocal, gestural, and physical social behaviors, exhibited by the selected toddlers with special needs toward other children in the classrooms with integration by reverse mainstreaming, could be identified and described.

3. The discrete visual, vocal, gestural, and physical social behaviors, exhibited by the selected toddlers with special needs toward other children in the classrooms with integration by pull-out, could be identified and described.

Limitations

The limitations of the case study design included the possible subjectivity of the researcher in interpreting the data, and the small sample size that did not allow for generalization to a larger population (Stein, 1984).

Environmental factors related to the settings and make-up of the segregated and integrated classrooms, including the physical layout of the rooms, objects and materials available, total numbers of adults and children, and adult participation in the children's free play, were not controlled in this study. These factors may have affected the social behavior exhibited by the selected toddlers with special needs under the different classroom conditions. When comparisons of social behavior are made between the classrooms, these situational discrepancies remain.

Significance of the Study

In the past, toddlers with special needs have been overlooked as an age group and population warranting attention to the development of peer-related social skills. Instead, the preschool-age child with special needs has been emphasized in peer-related social behavior research. Enactment of recent legislation (Public Law 92-142, Public Law 99-457, Public Law 101-476, and Public Law 102-119) has promoted the provision of early intervention services to the

infant and toddler age groups. Center-based programs have evolved to meet the special needs of toddlers with developmental delays and/or disabilities. The specialized programs offered by early intervention centers typically have been segregated in nature; that is, the classrooms consisted exclusively of young children with special needs. In compliance with the "regular education initiative" (Public Law 92-142) and "best practices" for early intervention (Brault, 1992), programs for toddlers with special needs are beginning to make transitions from segregated to integrated designs, involving periods of the classroom day when toddlers with special needs participate in activities with typically developing peers.

The social behavior of toddlers with special needs is a pertinent research topic (Fundis, 1982) since this group of exceptional children appears to demonstrate deficits in social competence (e.g., difficulties in engaging in peer-related behaviors and in forming peer relationships), and the tendency toward social isolation (Fundis, 1982; Guralnick & Weinhouse, 1983; Odom et al., 1992). "Moreover, these difficulties pose a special concern for those handicapped children entering mainstreamed settings since peer relationships [and peer-related social behavior] play such a prominent role in the mainstreaming [and integration] process" (Guralnick & Weinhouse, 1983, p. 268).

Occupational therapists who provide early intervention services, need to assess the efficacy of segregated and integrated classrooms for toddlers with special needs within a social developmental context. The social behavior and social adaptive functioning of this population must be thoroughly examined before planning and implementing therapy and early intervention programs.

The toddlers selected for this study attended an early intervention center-based program in classrooms with groups of toddlers with special needs of equal developmental status (e.g., a developmental age range of 18-36 months). These primary classrooms were considered segregated, since all children in the group had special needs. Six months prior to this study, the center's occupational therapists and special educators established preliminary programs of early intervention involving classrooms with integration by reverse mainstreaming and integration by pull-out. Toddlers with special needs attending the center participated in the integration programs as supplemental to their segregated programs with typically developing toddlers. Although the goals for intervention were based on the educational tenets of normalization and the least restrictive environment (Hallahan & Kauffman, 1988), the center's staff had not identified a plan for strategies teachers and therapists

could use to promote social play among special needs students and their typically developing peers.

The advent of early intervention programs incorporating integration at the toddler-age level is likely to affect occupational therapy treatment practices with special needs young children. Researchers have not previously addressed what happens when toddlers with special needs and typically developing toddlers are brought together in early intervention settings for social development, educational, and therapeutic purposes. In order to address this issue, this study examined the nature of social behavior of toddlers with special needs toward typically developing peers who were in their integrated classrooms. The center's educators and therapists who were responsible for the integration programs involved in the study, could then have specific information available for deciding if, or how, to intervene in the toddlers with special needs' social experience with others, and for incorporating strategies to promote social play among children with different social skills, special needs, and experience.

CHAPTER 2

LITERATURE REVIEW

Chapter 2 provides an overview of research involving early intervention for toddlers with special needs. An occupational therapy developmental frame of reference which incorporates systems theory relating to the social development of young children with special needs, is examined, and the relevancy of research in this area is discussed concerning utilization in current early intervention practices. Research findings from the profession of occupational therapy, and the disciplines of child development and early childhood special education, regarding the social development patterns of the preschool and toddler period, will be reviewed. The lack of social developmental criteria for toddlers with special needs is discussed. The appropriateness of various observation measures for research of peer-related social behavior of toddlers with special needs is considered. The chapter concludes with a summary.

Occupational Therapy Developmental Frames of Reference and Early Intervention

Occupational therapy developmental frames of reference guide the provision of early intervention services to young children with special needs (Gorga, 1989). Yet, there is a

dearth of information in the occupational therapy literature examining the social development of young children with special needs. Occupational therapists in pediatric practice have traditionally considered social behavioral criteria based on normal developmental patterns, including theoretical foundations from Piaget, Erikson, and Havighurst (Mosey, 1986). Reilly (1974) contended that purposeful activity through play enables the child with delays or disabilities to acquire social skills. The conditions and underlying processes affecting the acquisition of social skills and the social development of young children with special needs, however, have not been examined. Therefore, that which is considered "normal" social development has been the customary criteria applied to early intervention with exceptional children (Guralnick & Groom, 1983; Walker, 1982).

Development of the infant-mother relationship has received emphasis in social development research of typically developing children, with the assumption that an infant's development of social skills will carry over to peer-related behavior around the age of three (Apolloni & Cooke, 1975). More recently, researchers have argued that focussing on an infant's and toddler's development of strategies employed with partners other than the child's mother, in various peer group situations, is a more

appropriate social developmental orientation (Beckman & Lieber, 1992; Guralnick, 1990d). These newer contentions are particularly relevant to occupational therapy service providers in early intervention, in light of the fact that toddlers receiving early intervention services often attend center-based programs, and consequently have early peer group experiences.

The developmental patterns of peer-related social behavior should serve as a basis for professionals (occupational therapists and infant educators) in designing intervention programs and implementing intervention strategies for toddlers with special needs (Guralnick, 1990d). Yet, there is very little research data concerning peer-related social development of this age group of youngsters with special needs. Guralnick and Weinhouse (1983) contended that "a system to assess peer-related social interactions compatible with the design and implementation of intervention strategies should be an essential component of all early intervention programs" (p. 268). Moreover, occupational therapists involved in early intervention should examine the underlying adaptive social behaviors of toddlers with special needs, beginning with their earliest exposure to other children, and in various peer group (early intervention classroom) situations.

Within a developmental framework, a "systems" approach can be applied when examining the mechanisms of social adaptive functioning in the early stages of life (Guralnick, 1992). Walker (1982) proposed that although disabilities in infancy present definite impediments to the achievement of pleasurable and growth-supporting interchanges, adaptations due to differences in the social interactive system function to establish homeostasis. Achieving certain developmental milestones from a systems perspective does not ensure the continuance of this adaptive ability. As Walker explained:

What may be an adaptive mechanism for maximizing functional developmental progression at one period may not be adaptive for the next period. Distinguishing the characteristics of interactions that are both functional and adaptive for the infant at each point in time, and those that are not, is therefore an investigative effort essential for providing a base for planning interventions that may attenuate the development of secondary and cumulative delay.
(p. 219)

An occupational therapist providing early intervention services based on developmental frames of reference, has a role in facilitating achievement of social developmental milestones (Florey, 1981), providing growth-facilitating environments (Dunn, Campbell, Oetter, Hall, & Berger, 1988), and preventing secondary delays as a result of disability (Bracegirdle, 1990). Therefore, increased understanding of the adaptive functioning of the young child with special needs with regard to the social development process, must be

achieved. It is crucial that occupational therapy researchers in early intervention address social adaptive behaviors of young children with special needs, in order to expand, test, and solidify theory and describe potential alternative processes of development for intervention purposes (Walker, 1982).

Social Development Patterns of the Toddler Period

Child development researchers have been examining the developmental patterns of the social behavior of typically developing young children for many years (Howes, 1988). Assumptions regarding social developmental patterns of the toddler period (13-36 months of age) vary widely.

Early researchers contended that social development proceeds from self, to parents, to toys, to peers, with a preponderance of "watching the peer" for the toddler period (Maudry & Nekula, 1939). Parten's (1932) research suggested that peer-related social development encompasses unoccupied and onlooker behavior, and solitary, parallel, associative, and cooperative play, with parallel play typically the most advanced form of peer-related social behavior exhibited by a toddler.

Barnes (1971) was unable to substantiate Parten's age-related social play patterns. Field's (1980) findings supported Maudry & Nekula's (1939) sequences of social

development, but also showed that infants and toddlers exhibited a greater frequency of peer-directed behaviors in the absence of their mothers. In Field's study, the condition of whether or not a mother was available in the presence of peers, made a difference in what was considered a social developmental pattern for the toddler period.

Howes (1988) purported that complementary and reciprocal play occurs in the early toddler period (13-24 months), and social pretend play in the later toddler period (25-36 months). She described complementary activity as the ability to exchange turns and roles in action, such as run and chase, hide and seek, and offer and receive. Hartup (1982) contended that in the second year of life, more coordinated and complex social behavior develops. For the early toddler period, he described peer social play as encompassing a simple interactive stage, with social exchanges lasting three or more reciprocal exchanges. In the late toddler period, Hartup described the emergence of a complementary-interactive stage: "Jason picks up several toys and gives them to David; David receives the toys, one by one. These exchanges mark the emergence of reciprocal roles--in this case, 'giver' and 'receiver'" (p. 527).

Fundis (1982) reviewed the developmental patterns of social behavior from case studies of toddlers. A brief description of the nature of toddlers' social play in the

article by Fundis includes the following: (a) The beginning of peer-related behavior is observed in infancy (6 months of age), and continues to develop during the toddler period. At age 2, peer-related social behavior becomes more complex, (b) Peer familiarity and experience are factors in social behavior, such that greater sustaining of interaction occurs with familiar peers and with more group experience, (c) Children direct play toward objects up to the age of 2, and subsequently direct play toward peers with object mediation, and (d) One-to-one interactions are most frequent in dyadic groups for 2-year old youngsters.

Opinions concerning the developmental patterns of the toddler period have varied with regard to the extent of a toddler's ability to engage in social interaction with peers; however, peer-related social competencies for the toddler period have become increasingly recognized (Guralnick, 1990d). The belief that the characteristics of the social behavior of toddlers is simple, has given way to a more complex consideration of the social competence of this age group of youngsters. Another factor that could conceivably affect the development of peer-related social competence is the frequency and age at which toddlers are regularly exposed to other children, such as in day care situations (Appoloni & Cooke, 1975; Guralnick, 1992). These early playgroup experiences could feasibly influence peer-

related social development patterns in the toddler period. Apolloni and Cooke (1975) hypothesized that "interactions between infants [or toddlers] may serve to facilitate their overall behavioral development, particularly if the environment in which they interact is structured to maximize the developmental quality of their interactions" (p. 15). In view of this, the issue of peer-related social development is a very relevant one to occupational therapists in early intervention, for designing center-based programs and therapeutic group (classroom) experiences for toddlers with special needs.

Intervention in the Social Development of Young Children with Special Needs

Within the past three decades, the social development of young children with special needs has come to the attention of researchers in child development and early childhood special education (Guralnick, 1990d, 1992; McEvoy, Odom, & McConnell, 1992). It has been hypothesized that there are social development sequences for young children with special needs parallel to those of typically developing children (Field, 1980; Field, Roseman, Destefano, & Koewler., 1981; Guralnick, 1981a; Odom et al., 1992).

Field (1980) compared social developmental sequences for preschool age children with special needs and typically

developing preschool age children in homogeneous classrooms. Her findings indicated that for each group, there were developmental progressions from individual, to adult, to toy, to peer-related behaviors. Her findings also revealed no age-dependent behaviors for either group. In addition to her findings, Field (1980) made two observations relevant to any social behavioral study of young children with special needs. First, "generalizing about behaviors of handicapped children may be questionable as each child presents a somewhat unique profile" (Field, p. 324). Secondly, her pilot study revealed the existence of very simple social behaviors, as well as "stereotypical" behaviors as part of the social behavioral repertoire of her subjects with special needs. She included in her coding, peer-related and self-directed or self-stimulation behaviors. She speculated that "these [stereotypical] behaviors appeared to interfere with more varied, developed interactions with others, and if prolonged, they would be a serious barrier to other-directed interactions" (Field, p. 324). These predictions warrant further review since the researcher observed her subjects only in specialized (segregated) settings. Comparisons under these conditions are questionable since it could be argued that the deficits primarily reflected the limitations imposed by the low

social skill levels of peers with special needs (Guralnick & Groom, 1987b).

"Development and evaluation of procedures for promoting the social competence of young children with disabilities has increased dramatically" (McEvoy et al., 1992). Several studies have been conducted in an effort to assess and/or improve social skills of young children with special needs utilizing "mainstreamed" or "integration" practices with typically developing peers. Comparatively little differences in the social skills of young children with special needs in integrated and segregated settings were found in various studies (Apolloni & Cooke, 1978; Field et al., 1981; Guralnick 1981b; McEvoy et al., 1992). It was noted in the study by Guralnick and Groom (1987a) that "in group settings containing delayed and nonhandicapped children, factors related to self-selection, the tendency toward social isolation of the delayed children, and the special difficulties many delayed children experience in complex social environments may have operated to limit any effects of the availability of nonhandicapped children" (p. 179).

The specific benefit of systematic pairings of preschoolers for therapeutic purposes was identified in the Guralnick and Groom (1987a) study. Although the pairing of developmentally age-matched peers did not promote social

skill improvement in the preschoolers with mild delays, improvement in peer-related skills was witnessed when older typically developing children were matched with younger children with mild delays. The benefits of the integration process were realized by controlling social partners in this case.

Researchers have been very interested in investigating the efficacy of integration involving the preschool age group of children with special needs for the remediation of social deficits (Beckman & Lieber, 1990; Guralnick; 1990d; McConnell et al., 1992). However, the toddler age group of children with special needs has been virtually overlooked as a population warranting emphasis on peer-related social skill development (Adylett, 1993; Apolloni & Cooke, 1975). What is now beginning to be recognized, is the significance of peer-related social experience for toddlers with special needs (Beckman & Lieber, 1992; Strain & Kohler, 1988).

Recent evidence suggesting the benefit provided by appropriately matched typically developing peers to facilitate social interactions with preschool age children with special needs, could very likely fuel the movement toward integration in the toddler age group of children with special needs. The likelihood of integrated early intervention programs for toddlers with special needs increases appreciably, as the human and legal considerations

become more evident (Brault, 1992). In reference to what already has been suggested for integration practices with preschoolers with special needs (Guralnick & Weinhouse, 1983), a system of observation measures of peer-related social behavior is needed to assess the acquisition of social skills and social adaptive abilities of toddlers with special needs, compatible with the design and implementation of early intervention programs. This is important in order to identify peer-related social deficits and to utilize a developmental framework for deriving treatment goals and therapeutic strategies.

Observation Measures of the Social Development of Toddlers with Special Needs

Determining appropriate social behavior measures necessitates a thorough understanding of the behaviors that are adaptive and socially significant in nature (Guralnick, 1992). Identifying the nature and kinds of the most basic of sociable acts and social exchanges that toddlers with special needs exhibit, is an initial step toward intervention in the social development process (Beckman & Lieber, 1992).

A brief review of observational measures of social behavioral criteria that have been utilized in the study of preschool age children with and without special needs should

indicate some applicable criteria for use in research with toddlers with special needs. Free play has been one of the most frequently observed activity for assessing children's social behavior, since it has been found to be an occupation rendering high levels of interaction in youngsters (Sainato & Carta, 1992). A hierarchical scale of social play behavior was established by Parten (1932), and has been used a great deal in the naturalistic observation of young children. The scale presumably indicates a developmental hierarchy of social play behavior.

The Parten (1932) social play scale is a tool used in occupational therapy for collecting data concerning social play competencies of children (Kielhofner & Barris, 1984). Kielhofner, Barris, Bauer, and Shoestock (1983) applied the Parten social play scale in the study of a comparison of the social play behaviors of hospitalized and nonhospitalized children with disabilities. The Parten scale has been frequently used in studies involving preschool age children with special needs (Fredericks et al., 1978; Guralnick, 1981a; 1981b; 1986; Guralnick & Groom, 1987a; 1987b; Guralnick & Weinhouse, 1983, 1987; Peterson, 1982; Wintre & Webster, 1980). Although Parten's social play measures appear to be applicable to preschool age children with special needs and to provide a developmental profile of children's social play, the Parten social play scale does

not provide a thorough or detailed enough account of the various peer-related social behaviors of toddlers with special needs that may occur during free play in different peer group or classroom situations.

Other social behavior measures have been utilized in research, as well. Peer-directed social behavior was observed in terms of positive and negative actions in various studies of preschoolers with special needs in mainstreamed classrooms (Fundis, 1982; Peterson, 1982; White, 1980). "Aggressive" actions such as hitting, biting, and struggling with others were considered negative social behaviors, in contrast to the positive or non-aggressive types of peer-directed behaviors of smiling, talking to a peer, and playing alongside a peer. The distinction between positive and negative forms of peer-directed social behaviors could be useful when assessing the outcomes of bringing together young children in classrooms or play situations, and when determining positive and negative peer role models.

Another observation measure of social behavior is a socialization scale utilized in the Black, Freeman, and Montgomery (1975) study, designed to assess the social competence of preschool age children with special needs in different classrooms. Using the socialization scale, one could distinguish between peer-related social behaviors that

were visual, vocal, gestural, or physical in nature, or that involved proximity or toy-related social exchanges. These were indicated by such terms as "touches," "takes toy away," "talks to peer by vocalizing or gesture," "plays with peer side-by-side," "takes turn," and "shares toy."

The peer-related categories that Eckerman and Whatley (1977), and subsequently Field (1980) applied in their research, are also representational of a wider scope of peer-directed social behaviors. These included observation measures relating to social behaviors directed toward peers such as "looking," "smiling," "vocalizing," "touching," "wailing," and various toy-related social behaviors involving peers that concern "acceptance" of a toy being offered, resistance to "relinquishing" a toy to another, and "struggle" over a toy with a peer.

Descriptions like the ones related in the Black et al. (1975), Eckerman and Whatley (1977), and Field (1980) studies, were formerly identified in a descriptive study of young children's social behavior in free play situations by Bridges (1931). From indepth preliminary observations, Bridges extracted descriptions of the nature of social behavior demonstrated by nursery school children toward peers. These descriptions then served as criteria for an observational scheme. The repertoire of social behavior of selected children was reviewed in case studies. A great

deal of clarity regarding the nature of social behavior of young children during free play was achieved by Bridges, using descriptive research design.

Since broad categories and checklists or scales of social play behavior (e.g. Parten's social play scale) appear to be inadequate in relating a complete picture of the social behavior of young children with special needs, a more descriptive and detailed account of peer-directed social behavior is warranted. As demonstrated by Bridges (1931), this is achievable by case study methodology. Furthermore, Guralnick (1992) suggested that the use of video recordings for analyses of social behavior would be an effective method for gaining "the type of perspective necessary for understanding how behavior with peers unfolds within and across sequences of social exchanges" (p. 38).

Implications for Occupational Therapy Early Intervention Research and Practice

Interest in studying the social behavior and peer relations of young children with special needs is in part due to the establishment of mainstreamed and integrated programs. Impetus for mainstreaming or integration was the "least restrictive environment" and normalization principle (Hallahan & Kauffman, 1988) proposed in the Education for All Handicapped Children Act of 1975 (Public Law 92-142),

now known as Public Law 101-476, the Individuals with Disabilities Education Act of 1990 (IDEA) and the Individuals with Disabilities Education Act Amendments of 1991 (Public Law 102-119). In an effort to develop intervention strategies for children who lack social competence, show delays in the development of social skills, or tend to be excluded from social interactions due to disabilities, mainstreamed and integrated classrooms have been implemented as the primary way in which schools can foster normalization (Hallahan & Kauffman, 1988).

Today, content of this legislation is affecting the provision of early intervention programs for toddlers with special needs. Occupational therapy services are stipulated in the guidelines (Dunn et al. 1988). In the genre of mainstreaming and integration programs for preschool age children with special needs, early intervention programs could feasibly incorporate integrated classrooms as "best practices" for toddlers with special needs (Brault, 1992). Brault cautioned about generalizing from preschool policies for integration, because issues for infants and toddlers differ substantially from those relating to preschoolers. These differences include "developmentally appropriate practices, benefits from exposure to nonhandicapped peers, clarity of the law, and individual family needs" (Brault, p. 78). Relatively little research exists for the toddler

period concerning peer-related social behavior, particularly for toddlers with special needs. Since it is not precisely known how toddlers with special needs can benefit from interactions with each other and with typically developing peers, it is essential to examine their social behavior and social adaptive abilities in depth in order to determine the efficacy of segregated and integrated early intervention programs.

Summary

The social development of the toddler with special needs is not a simple phenomenon. Researchers are beginning to discover the range of considerations involved in toddlers' social behavior, and how social competence may be affected by disabilities. The occupational therapy developmental frames of reference are appropriate contexts from which to study the acquisition of peer-related social skills and social adaptive abilities of toddlers with special needs.

Due to recent legislation advocating early intervention services for children with special needs between the ages of birth to 5, it is likely that many of the practices of special education of preschoolers, including mainstreaming and integration, will be incorporated into early intervention programs for toddlers with special needs. What is not keeping pace with the recent increase in services and

center-based (classroom) programs for toddlers with special needs, is research guiding social development intervention and therapeutic strategies. There is relatively little information available that adequately describes the nature of social behavior of toddlers with special needs directed toward other children. This being the case, research is needed for extending the knowledge base of the peer-related social behavior of toddlers with special needs that could contribute to occupational therapy intervention in segregated and integrated early intervention classrooms.

CHAPTER 3

DESIGN AND METHODOLOGY

In this chapter, the purpose of the study and research questions are reviewed. A description of the subjects and classrooms is provided, and the research design, data collection and instrumentation, and method of data analysis are explained.

Purpose and Research Questions

By observing the free play of toddlers with special needs, the purpose of this study was to identify and describe the nature of social behavior of these children, in the contexts of early intervention programs involving segregated and integrated classrooms. The research questions derived from this objective were:

1. What was the nature of the social behavior of toddlers with special needs toward other children who were in their segregated classrooms?
2. What was the nature of the social behavior of toddlers with special needs toward other children who were in their classroom with integration by reverse mainstreaming?
3. What was the nature of the social behavior of toddlers with special needs toward other children who were in their classroom with integration by pull-out?

Description of Subjects and Classrooms

The children designated for this study were toddlers with special needs between the ages of 18-36 months. They attended a center in Alameda County that provided early intervention, with segregated and integrated programs for children with disabilities and developmental delays. Five out of eight toddlers, who were enrolled in segregated and integrated programs, were selected for individual case studies. Infant educators from the early intervention center were asked to identify potential participants in the study who met the following criteria: (a) the student was expected to be enrolled in the center-based segregated and integrated programs for the entire period of the study, including the months of March through June, 1993, (b) the student was considered to have mild to moderate developmental delays (determination of this was done by staff occupational therapists, based on established developmental evaluations and documented in the child's chart), and (c) the student had been demonstrating regular attendance for the time he/she had been enrolled at the center. Six prospective subjects were identified. This researcher contacted parents or guardians of all six toddlers with special needs as potential participants in the study. The first five children of parents or guardians who

were in agreement to the terms of the study were the ones accepted for participation in the study.

This researcher obtained approval to involve human subjects in the study from the Human Subjects' Institutional Review Board (HS-IRB) of San Jose State University (Appendix A) prior to subject solicitation and data collection. In accordance with the HS-IRB protocol for human subject research, subjects were solicited from the identified subject pool with letters addressed to parents or legal guardians indicating the nature of the study and the information necessary to make an informed decision (Appendix B). Children were selected for the study on a first reply basis. Those families indicating interest in allowing their children to participate, but who were not among those selected, received letters to that effect (Appendix C). The parents of those children chosen for the study received confirmation letters (Appendix D). In addition, parents of other children enrolled in the segregated or integrated programs were notified that their children may be present in the classroom during the video taping (Appendix E).

The primary classrooms of the selected toddlers with special needs were conducted by the early intervention center, Monday through Thursday of each week between the hours of 8:30 a.m. and 12:30 p.m.. These classroom were

considered "segregated" such that only children with special needs, a special education teacher, and adult classroom aides were present. In addition to their attendance in the segregated classrooms, the selected toddlers with special needs participated in classrooms with integration by pull-out and integration by reverse mainstreaming. The integrated classrooms included toddlers with special needs and typically developing toddlers between the ages 18-36 months, regular education and special education teachers, and classroom aides. The typically developing toddlers were enrolled at a day care facility that was located adjacent to the early intervention center. The two facilities were separate, but offered to their students cooperative programs of that encompassed the classrooms with integration by pull-out and integration by reverse mainstreaming.

The segregated and integrated classrooms offered similar periods of free play, but were different in the total number and ratio of children to adults present. The segregated classrooms included a period of "entry free play" and a period of "free play." These two free play sessions were separated in time by other structured activity. The average number of children involved in both play periods of the segregated classrooms was eight, consisting only of toddlers with special needs. Usually four adults were present during these times, resulting in a child-to-adult

ratio of 2:1. The adults arranged the play environment with play areas or play objects, and were available for participating in the activity.

Entry free play was the only free play conducted in the classroom with integration by reverse mainstreaming. The average number of children involved was 15, with an average of five adults present for structuring the environment and engaging in the activity. The ratio of children to adults was 3:1.

The classroom with integration by pull-out included a free play period. The average number of children involved in this play group was 24, and the average number of adults present was eight. The child-to-adult ratio was 3:1. Adults were also present for participation in the play and had arranged the environment with play areas or play objects.

Research Design

An observational study using qualitative research methods, as described by Gay (1981) and Merrill (1985), was implemented in this study. In accordance with the recommendation by Guralnick (1992) of using nonparticipant, naturalistic observation by video recording young children's social behavior, the method of video taping was employed for collecting data. Five toddlers with special needs were selected for case studies. Detailed recordings of these

subjects' social behavior were obtained from video taped segments of entry free play and free play in the segregated classrooms, entry free play in the classroom with integration by reverse mainstreaming, and free play in the classroom with integration by pull-out.

Merrill (1985) described that in qualitative research, what is being investigated gives rise to the concepts that develop as the research progresses. Identifying and describing the nature of social behavior were the primary considerations in answering the research questions of this study. Bridges (1931) demonstrated how trends of young children's social behavior could be derived from analyses of case studies. After answering the research questions, this researcher also determined the social behavioral competence of each subject and identified trends of social behavior of the toddlers with special needs as a group under each of the circumstances.

Data Collection and Instrumentation

Video recordings of the free play of the selected toddlers was obtained from a high quality VHS recorder. This researcher did all of the video taping over a 15-week period. Each participant's free play was video taped for a total of 10 minutes per week for the duration of 5 weeks in his/her segregated classroom. During the next 5 weeks, the

subjects' free play was video recorded for 10 more minutes each week while participating in the classroom with integration by reverse mainstreaming and in the classroom with integration by pull-out. For the last 5 week period, each child's free play was video taped for 10 minutes once again in his/her segregated classroom. Video recordings were done of children who were absent the next time they attended the class. A total of 200 minutes of video recording of each subject was collected. The dates of taping included the period between March 22, 1993 and June 30, 1993.

Before dictating the case studies, this researcher determined the need for operational definitions for the "delineation of the procedures and tools required to make the observations or measurements" (Polit & Hungler, 1983, p. 36). The video recorded data was reviewed by this researcher in order to isolate what constituted social behavior in the naturalistic (classroom) settings. It was necessary to have descriptions (operational definitions) as indicators of the nature of the social behavioral repertoire of the selected toddlers with special needs.

The literature of research of young children's social behavior was reviewed for operationalizing the definitions of the variables. The most appropriate indicators of social behavioral criteria for this subject group were selected

from previous research. Per Slee's (1987) procedures for interpreting observational data, the operational definitions were formulated into coding schemes. An observational scheme of peer-directed response measures (Table 1) was developed.

Table 1.

Observational Scheme of Peer-Directed Behaviors

Response measure	Description
Onlooker	Sustained, indiscriminate peer-directed visual regard
Proximity	Remaining near or following peer (within 3 feet)
Parallel play	Playing beside peer using own toys or playing in own way and in sufficient proximity
Sharing toy	Mutual contact with an object
Offering/giving toy	Offering or giving object to peer
Accepting toy	Accepting object from peer
	(table continues)

Response measure	Description
Resisting/struggling	Resisting relinquishing toy
Relinquishing toy	Giving up toy
Taking toy	Physically removing toy from peer
Imitation	Duplicating another's action
Hitting	Forceful physical contact by body part or object
Reciprocal exchange	Single incidence of either visual regard, vocalization, gestural, or physical contact (e.g. hugging) involving target child and peer
Multiple reciprocal exchanges	More than one consecutive incidence of reciprocal exchanges
Vocalizing	Vocalizing in response to peer's action or vocalization
Pointing/gesturing	Gesturing in relation to peer

(table continues)

Response measure	Description
Joining in group	Entry in group of peers
Greeting/bidding goodbye	Making gesture or vocalization to greet or bid goodbye
Turn-taking (adult monitored)	Rotation of activity with adult prompting or mediation
Turn-taking (alone)	Rotation of activity with no adult prompting or mediation
Agitated	Tantrum-like behavior, crying, or noticeably upset due to peer
Not noticing peer	Failure to notice peer in vicinity
Not responding to peer	Failure to respond to peer's social bid
Getting out of way	Moving to avoid or accommodate peer

An observational scheme of self-directed behavior was formulated in order to appropriately represent the social behavioral repertoire of this subject group (Table 2).

Table 2.

Observational Scheme of Self-Directed Behavior

Response measure	Description
Unoccupied	Random movement or stationary behavior lacking an overt goal
Preoccupied	Sustained attention to self or to toy and therefore oblivious to surroundings
Solitary play	Playing alone
Looking	Looking at self in mirror
Wailing	Continuous crying
Smiling	Non-directed smiling
Vocalizing	Non-directed sounds
Moving	Stereotyped movement (e.g. rocking, head shaking)
Touching	Touching self in repetitive manner

Certain social behaviors were also observed in preliminary review of the data that were specific to the segregated and integrated classrooms. These newly

identified response measures were added to the peer-directed and self-directed observational schemes.

The derivation of response measures and descriptions found in Table 1 or Table 2 was as follows: The categories of "onlooker," "unoccupied," "solitary play," and "parallel play" were taken from Parten's social play scale, with modification of descriptions for this study. The definition provided by Peterson (1982) of "parallel play" was the adapted version used for this study. The peer-directed and self-directed behavioral criteria that were derived from Field's (1980) study included "offering toy," "sharing toy," "taking toy," "hitting," and "looking," "wailing," "smiling," "vocalizing," "moving," and "touching," respectively. The classifications of behavior involving peers provided by Eckerman and Whatley (1977) were "offering toy," "accepting toy," "resisting/struggling," "relinquishing toy," and "duplicating action." Hartup's (1982) study provided the concept of reciprocal exchanges. In case studies of young children's social behavior in a nursery school environment, Bridges (1931) noted social behaviors that did not occur given the opportunity. The criteria of "not noticing peer" and "not responding to peer" were incorporated into this study's peer-directed observational scheme.

Additional response measures identified as specific to the situations in this study in the peer-directed category were "proximity," "vocalizing," "greeting/bidding goodbye," "pointing/gesturing," "turn-taking (adult-monitored)," and "turn-taking (alone)," "agitated," and "getting out of way." The term of "preoccupied" was added as a response measure to the self-directed behavior category and defined according to overt behavior observed in preliminary review of the video records.

Criteria from the observation schemes provided operational definitions of social behavior that could be applied in making a clinical assessment of the social competence of each subject. The following is a description of how, based on the literature (Guralnick, 1992; Guralnick & Weinhouse, 1983; Howes, 1988), the criteria from the observational schemes was delineated with regard to degree of complexity and applied in the determination of level of social competence:

Simple peer-directed social behaviors included onlooker and proximity responses. Children who typically evidenced these kinds of behaviors without regularly exhibiting other more complex forms of social behaviors, were considered to possess a low level of social competence. A low level of social competence was also indicated by a child's repeatedly not noticing a peer or not responding to a peer. Whether

parallel play represents lower or higher social competency has been disputed in the literature (Guralnick & Weinhouse, 1983), and therefore was not considered sufficient criterion to make the distinction between low and high levels of social competence in this study. Since the remaining peer-directed social behavioral response measures (see Table 1) were obtained from studies involving children who were slightly older than the subject group in this study, it was deemed that they characterized more complex forms of social behavior with respect to this population. Therefore, subjects frequently demonstrating these behaviors were regarded as having a high level of social competence.

For purposes of this study, the self-directed behavioral response measures of solitary play and preoccupied behavior were considered simple kinds of social behavior and indicative of a low level of social competence. Stereotyped mannerisms (moving and touching response measures) were considered potentially negative since the repetitive nature of the behavior could limit or prevent opportunities for social interaction with peers (Field, 1980). Children evidencing these characteristics were believed to be at risk for delays in the development of social competence. Another category of social behavior that was considered negative was the response measure of hitting, since this behavior is generally acknowledged as

being aggressive and socially inappropriate (Bridges, 1931; Eckerman & Whatley, 1977).

Analyses of the Data

The next step in the qualitative research process was writing the case studies for interpreting and summarizing the data (Merrill, 1985). Using the operational definitions as criteria for interpreting the data, this researcher reviewed the video tapes of each subject, identified any of the behaviors listed in the observation schemes, and wrote a detailed analysis (case study) of his/her behavior. From the information obtained in the case studies, the research questions were answered.

The descriptive design allowed for analyzing data in greater detail and for taking into account unique characteristics revealed by each subject as representative of his or her repertoire of social behavior. Accordingly, a clinical picture of the social competence of each child, as well as an overall perspective of the trends of social behavior of toddlers with special needs in the segregated and integrated settings were obtained.

CHAPTER 4

DATA AND RESULTS

In this chapter, the data analysis is reported in case study format for each of the selected toddlers with special needs (Subjects A through E, respectively). Pseudonyms are used for all subjects except for Subject A, whose real name is used at her parents's request. Other identifying information for each subject is provided including medical diagnoses (if applicable), the degree of developmental delay, and each child's group experience in terms of the number of times per week the child participated in a group/classroom situation (time in group) and the age the child entered the center-based program (age subject entered group experience). The center's charts for each subject were consulted for deriving the medical and diagnostic data, and personal group experience. The research questions are addressed in the last section of this chapter.

Each case study includes a brief descriptive account that is provided as an example of that child's typical social behavior for one of the classroom situations: i.e., the segregated classroom "A" (initial five week period), the classrooms with integration by reverse mainstreaming ("IRM") and integration by pull-out ("IPO") (middle five week period), or the segregated classroom "B" (last five week

period). With the data reconstituted in terms of the peer-directed and self-directed response measures, itemized and defined in the tables (see Table 1 & Table 2), the social behavior of that child over the course of the study is summarized and compared across settings.

The term "peer" is used to designate other toddlers with special needs, with whom Subjects A, B, D, and E had extended familiarity through the early intervention program in which they were enrolled. Subject C was unfamiliar with the peers in the segregated classroom at the beginning of the study. "Typically developing peer (TD peer)" is the term used to apply to the toddlers without special needs from the day care center who participated in the integration programs. Each subject had very little familiarity with the TD peers since Subjects B, C, and D were initially exposed to the TD peers at the time of the study. Subjects A and E had prior exposure to the TD peers consisting of only four previous integration sessions.

Case Studies

Subject A

Jaclyn was 31 months and 30 days old at the beginning of the study. She had a diagnosis of Down Syndrome and was documented as having moderate developmental delays as determined by her occupational therapist at the center.

Jaclyn's time in group was 4 days per week and the age she entered the group experience was 18 months old.

Segregated Classroom A

During the entry free play period, Jaclyn's social behavior toward her peers is depicted in the following account:

Jaclyn tumbled into the room, then stopped. She hovered near a corner or wall, head and eyes cast downward. Something drew her attention to some spot in the play scene that was located in the middle of the room. She hesitated until an adult called her to come over to the group and join in the play. She approached the group and began to play among her peers, intermittently leaving to play alone or to engage in parallel play with her peers. Often, she ran over to gaze into the mirror and become preoccupied with looking at her many facial expressions. She uttered no sounds. She repeated many of her actions over and over again, including running to the mirror, and waving to herself. She failed to notice the peer next to her, and sat down almost on top of her. While moving around, she encountered a peer busily attending to a kitchen apparatus. For a short period, Jaclyn and peer shared the toy; the peer opening the oven door and Jaclyn closing it in reciprocal fashion. Later, Jaclyn ran by a peer who was stacking blocks, and pointed at the structure. When Jaclyn sat down and started building with her own blocks, a peer came near her and grabbed the block in Jaclyn's hand. Jaclyn relinquished it, and brooded. Then she sprang up and resumed moving around the room.

The salient characteristics of Jaclyn's social behavior in each of the classroom situations are summarized as follows:

In the segregated classroom A, Jaclyn did a great deal of moving around by herself and engaging in self-directed,

self-stimulation behaviors, with intermittent peer-directed actions of gesturing toward peer, parallel play, observing, sharing toys, and incidental visual reciprocal exchanges.

In the IRM classroom, Jaclyn greeted and bid farewell to the TD peers, but was not usually found in close proximity to them or imitating them. She engaged in little parallel play and no sharing of toys, but instead spent a great deal of time preoccupied with her own activity or watching (observer behavior) the TD peers.

In the IPO classroom, higher levels of peer-related social behaviors were observed. Jaclyn spent less time focussed on herself, and more time observing TD peers, following them in close proximity, and playing in parallel with them. There were some instances of high level peer-related behaviors of multiple visual and gestural reciprocal exchanges, imitation, and sharing toys.

During the last five weeks in the segregated classroom B, Jaclyn was observed frequently engaging in high level peer-related social behaviors including multiple reciprocal exchanges of the visual, vocal, gestural, and physical kind. These were sustained instances of smiling and touching, patting and hugging, and sharing toys with peers.

Subject B

Ricky was 26 months and 15 days old at the beginning of

the study. He entered the group at the age of 12 months, admitted to the early intervention program for moderate developmental delays most noticeably in the gross and fine motor, language, and social areas. He attended the center (time in group) 4 days per week.

Classroom with Integration by Reverse Mainstreaming

Ricky was standing holding onto the parallel bars and aimlessly swinging his leg, when six TD peers entered his classroom. He watched them intently, following each child's movement around the room. Ricky eventually started shuffling around the room with his head and eyes focussed downward, when he ran face-to-face into a TD peer. Ricky stopped and reached out to touch his playmate, but the TD peer avoided his reach. Ricky pursued him briefly, then lingered by the parallel bars, and watched his new playmates curiously. A TD peer came alongside Ricky at the parallel bars, but Ricky moved out of his way. Ricky stood around unoccupied while brushing his arms along the sides of his body, shaking his hands, and swaying his body repeatedly. Eventually he sauntered over to the slide where other children were playing. He stood out of the way until an adult came over to assist with turn-taking. Ricky took his turn, but acquiesced to others when they stepped in front of him. Every now and then he stopped playing and proceeded to occupy himself with repetitive movement of the arms and legs.

In the segregated classroom A, Ricky demonstrated a variable repertoire of social behavior, sometimes observing, playing in parallel with, or gesturing/pointing toward peers, and other times engaging in repetitive stereotypical movement, solitary play, or unoccupied behavior. The self-directed mannerisms that were most frequently manifested by Ricky were swinging his arms, shaking his hands, scratching

his head, and moving back and forth in one area. Frequently, he failed to notice a peer in the vicinity. On occasion, Ricky followed a peer closely (proximity) around the room with his focus on the child's toy. When a peer desired Ricky's toy and tried to take it from him, he relinquished the object in his possession without a struggle. He would then stay close to the peer with the desired toy, until the peer handed it to him or put it down. No imitation of another peer's behavior, sharing of toys, or vocal, gestural, or physical reciprocal exchanges were evidenced by Ricky during this period. His overall level of social competence was considered low.

In the IRM classroom, Ricky showed a preponderance of observer, unoccupied, and self-directed behavior. He appeared to be very aware of the movements of the TD peers, and usually got out of the way of the faster moving and more motorically adept playmates. He did not approach an individual or a group of TD peers playing together, although he briefly responded with a gesture (single reciprocal exchange) to the social bid of a TD peer. When not alone, he was found sitting among his peers in parallel play situations. He always relinquished his toy, as he did with his peers, to a TD peer desiring the object in his possession, although he would not follow the TD peer for

long. No sharing, imitation, or reciprocal exchanges were evidenced.

In the IPO classroom, Ricky remained for the most part on the outside of groups, and would not even enter a play area unless he was led there by an adult. He often sat down in one place, unoccupied, watching indiscriminately the activity around him. At times he would be sitting alone playing with a toy (solitary play), or in the middle of a group of peers who were moving and playing all around him, but he failed to notice TD peers in the vicinity, preoccupied with his own toy.

The social behavior that Ricky demonstrated in the segregated classroom B was slightly higher in level than in all previous situations. Although, he continued to relinquish a toy in his possession without a struggle, he was now able to express a verbal protest to this action: For example, "My toy!", he complained on a few occasions. He succeeded in getting the toy back, however, only when an adult would intervene on his behalf. He did not share toys. He engaged in parallel play more frequently in this segregated classroom, but often continued to fail to notice peers in proximity to him. Therefore, parallel play, single incidences of talking to a peer, and of engaging in visual and gestural reciprocal exchanges, were the most significant

peer-directed social behaviors evidenced by Ricky during this period.

Subject C

Marcie was 30 months and 17 days old at the beginning of the study. Marcie was prematurely born at 31 weeks gestation, and her newborn diagnoses included chronic lung disease and atrial septal defect. She was later diagnosed (prior to entry into the program) with congenital cerebral diplegia. Her occupational therapist at the center reported her as being mildly delayed in all areas except the gross motor area, in which she had moderate delay due to congenital anomalies. The age at which she entered the group experience was 30 months old, and her time in group was 4 days per week.

Classroom with Integration by Pull-Out

Since Marcie could not walk on her own, an adult carried her around the room, showing and describing to her the unfamiliar play areas. Then she placed Marcie in a standing position, and holding her by both hands, let Marcie walk over to the area of her choice. Marcie lingered near a wooden block with a steering wheel, and the adult lifted her into a straddled sitting position onto this pretend "automobile." Marcie was now left here to play among the TD peers and peers who were already playing. Marcie looked at the steering wheel and around the room, back to her automobile, and then to the TD peer who mounted the toy car next to her. There were numerous visual exchanges between them, as they proceeded to play in parallel. When the TD peer turned her steering wheel, Marcie did the same. Another TD peer pulled up in a third car and faced it directly head on to Marcie's. Marcie looked inquisitively at him. Without provocation, the boy

began to bang his car into Marcie's, thrusting her and the apparatus backwards. Marcie looked perplexed and troubled, although she did not cry or protest. As he continued, she searched the room with her eyes until she met the welcome glance of a familiar adult. The adult rescued Marcie by lifting her off the car and escorting her to the kitchen play area. Left on her own again, Marcie climbed up to stand at the sink. She noticed the TD peer gesturing and playing beside her. Marcie repeated some of the actions she witnessed and smiled at her companion. The girl smiled back.

Marcie was new to the center-based early intervention program, and appeared to have a difficult time settling in. She spent much of both free play periods of the segregated classroom A agitated and crying out, "I want my Mommy!". She sought a lot of one-one, adult-child attention during this time, and had little opportunity to engage in higher levels of social behavior. When she wasn't crying, she demonstrated observer behavior, and a few incidences of talking to peers, multiple visual reciprocal exchanges with peers, and sharing toys. Because of her language ability and the nature of her peer-directed social behavior when not agitated, Marcie's level of social competence was believed to be high.

When TD peers entered her classroom in the IRM situation, Marcie would observe her new classmates (TD peers) closely, and would stop crying for the entire entry free play period while the TD peers were in the room. She was observed involved in incidences of visual, gestural, and

physical reciprocal exchanges with TD peers. Her expression and demeanor seemed to appear inviting, since there were several instances of reciprocal smiles with TD peers. On one occasion, a TD peer approached Marcie to touch her braids. Marcie leaned her head toward the TD peer, and smiled (gestural reciprocal exchange). During this entry free play period, Marcie would remain stationary, but peers and TD peers periodically came in close proximity to her. She was found more often in parallel play with TD peers than with peers in this situation. (Note: peers tended to remain in one place during the IRM entry free play period and the TD toddlers moved readily in and among the groups of children playing.) Marcie did not engage in any imitation of TD peers or peers in this situation, but was found sharing toys with TD peers and peers. Marcie's physical disability severely limited her mobility in this free play environment, where the TD peers in particular were very mobile in a small area and potentially threatening to her. She appeared cautious about getting trampled on and, therefore, did not engage in any crawling or rolling around under these circumstances.

The IPO classroom was another situation in which Marcie was restricted from moving around and from moving toward or away from the advances of others (TD peers and peers). She found herself in a precarious situation in the incidence

with the TD peer ramming her car head on with his car. The reason Marcie withheld yelling for help is not known, since she possessed the verbal ability to do so. Her facial expression indicated that she was disturbed by the TD peer's offense, but her behavior revealed no spontaneous anger. She showed no retaliation toward the TD peer who threatened her. She often directed adults to place her in areas that were in the mainstream of activity or in proximity to TD peers, and engaged in parallel play, observing, imitating, and sharing toys with them. Marcie did not cry during the integrated play period as she did in the segregated classroom. Her level of social behavior was considered very high in the IPO environment.

In the segregated classroom B, Marcie appeared to become accustomed to the program, and was mostly playing rather than crying during the free play periods of this second segregated session. She most often played in parallel with her peers. There were some instances of struggles over toys, with Marcie resisting relinquishing the object to the peer and crying out, "Give me!". There were also more frequent instances of sharing toys with peers in this segregated situation. Her actions sometimes involved single or multiple visual, gestural, or physical reciprocal exchanges with peers. On a few occasions, Marcie allowed herself to be kissed and returned the social bid with a

smile or a frown. Although she was unable to walk independently, she occasionally crawled or rolled over toward where peers were playing, entering the group easily. Her wide range of social behaviors indicated a high level of social competence.

Subject D

Aaron was 28 months, 20 days old at the beginning of the study. He was born at 25 weeks gestation, and reportedly had bronchopulmonary dysplasia, mild hydrocephalus, and Grade II retinopathy of prematurity at birth. He was considered to have moderate global developmental delays by his occupational therapist at the center. Aaron entered the group at the age of 24 months. His time in group was 4 days per week.

Classroom with Integration by Pull-Out

Aaron was shaking his head repeatedly and mumbling vocalizations to himself as he hastily approached a pile of toys where others were playing. He sat beside a TD peer playing with a toy garage. She looked up at him briefly, then resumed paying attention to her object. Aaron found a toy bus, pulled it out of the pile, and began playing next to the girl. The two played in parallel for several minutes. Then the girl got up and left, and moments later Aaron picked up his toy and followed her to another play area. Here several TD peers were playing dramatically in the kitchen play area. Aaron took a seat on a sofa chair with the toy bus in his lap. The chair beside him was empty. Aaron saw a struggle ensue between two TD peers. When the scuffle was over one of the fighters sat in the chair next to Aaron. Aaron leaned over toward the TD peer, although the boy did not notice at first. Then Aaron started striking the child with his

toy bus. The surprised child ran away crying. Then another TD peer sat down in the seat next to Aaron and he began hitting her with the toy. She also ran away. Aaron then moved over a few seats where he was next to a third TD peer who was standing, playing with a toy at a table. The TD peer bent over to pick up something and Aaron began hitting him with the bus, pulling at his shirt and at his arms, and yanking his hair. The toddler screamed but did not fight back. Aaron kept attacking him until an adult intervened, who mistakenly assumed the attack was precipitated by the TD peer. She reprimanded and removed the TD peer from the scene. Aaron resumed playing with his toy bus and occasionally mumbling things to himself and shaking his head.

In the segregated classroom A, Aaron was often observed unoccupied, moving around in a non-directed manner, engaging in solitary play, or in self-directed stereotyped behaviors. His most recurrent mannerisms were shaking his head, twisting his fingers, and mumbling to himself. Since Aaron did not frequently come into close contact with peers during this period, the nature of peer-related social behavior that Aaron demonstrated involved brief observer behavior, some parallel play, and single incidences of visual reciprocal exchanges. These simple social behaviors indicated that Aaron's social competence was low. Although his encounters with peers were infrequent, he showed no aggressive behavior during this period.

In the IRM classroom, Aaron typically continued to remain isolated from TD peers, demonstrating solitary play, unoccupied behavior, non-directed moving, or stereotyped

mannerisms. He observed the TD peers much more than peers in the previous and the present situations. His parallel play involved primarily peers from his segregated classroom. Therefore, his level of social behavior was evaluated as being very low in this case. He was able to play in proximity with the TD peers, sometimes sharing a toy. These social exchanges involved single incidences of visual and physical reciprocal exchanges for brief periods. Then, Aaron would jump up and run around the room, engaging in self-directed behaviors.

Behaviors not seen during the periods of the segregated and the IRM classrooms, appeared in the IPO classroom situation. These were hitting and other aggressive acts toward TD peers, that appeared to be unprovoked. (It is noted that the aggressive behavior related in the aforementioned IPO classroom account, occurred shortly after Aaron witnessed TD peers in an altercation.) Although Aaron was able to play alongside (parallel play) some TD peers, and even occasionally share play things, he also directed aggressive behaviors toward some of them. Aaron often appeared confused and agitated by the elevated level of stimulation produced in the free play environment of the IPO classroom. His erratic behavior was not completely unexpected. His aggressive behavior may have also been in response to inappropriate modelling of the negative

behaviors of TD peers, reproduced without clear cause by a toddler with deficits in social competence and with difficulties in establishing peer relationships.

In the segregated classroom B, the social behavior evidenced by Aaron was of a higher level than previously demonstrated toward peers in a segregated situation. He was found more often playing in parallel with peers, sharing toys, and participating in visual reciprocal visual exchanges with them. He also engaged in vocalizations around his peers and in response to a vocalization made by a peer. He jumped up and down, and ran around, smiling and squealing to himself, or in response to someone else's vocalization. Although he was found less often playing alone, there were still instances when he demonstrated the stereotypical mannerisms of head shaking and twisting of fingers. Aaron showed no aggressive behaviors toward peers during this period.

Subject E

Jason was 29 months, 8 days old at the beginning of the study. There were no remarkable events surrounding his birth reported in Jason's chart at the center. His occupational therapist considered him to have mild to moderate developmental delays in all areas. Jason's time in

group was 4 days per week and the age he entered group experience was 24 months old.

Segregated Classroom B

Jason was seated on a mat amongst a pile of toy instruments. He was beating his drum with a mallet next to a peer who was doing the same. Once in a while, Jason would smile to himself or look at and smile at his playmate. A third peer joined the group and quickly grabbed Jason's drum away. Jason yelled, "Hey!" and reclaimed the toy. Seeing that his peer didn't have an instrument, Jason picked up another drum and handed it to him. This kind of play incorporating sharing toys and physical and visual exchanges proceeded for some time. Eventually, Jason left the group and crawled into his usual play spot inside the "peek-a-boo" box (a large hollowed out apparatus with various openings or holes in the sides allowing a child to stick a body part or crawl through. Shortly thereafter, one of his peers approached the box, taking a position on the outside of it. Jason was within the structure with his drum stick and drum. When the peer stuck her head inside an opening, Jason lightly tapped her on the head with the drum stick. This playful physical contact between Jason and peer continued for a few minutes, until the girl eventually withdrew her head and rubbed it. Jason extended the drum stick to the girl and deposited it in her lap. Next he climbed out of the box and cruised alone around the room.

Jason spent much time in proximity with peers in the segregated classroom A. He was found frequently playing in parallel with peers, and demonstrated an array of peer-directed social behaviors. Some of these were toy-related incidences with peers such that Jason took a toy away from a peer, struggled with a peer over a toy, resisted relinquishing it, as well as sharing a toy with a peer.

When an adult was present, Jason took turns, but when no adult was there to monitor the activity, Jason could overpower peers, push them aside, and get in their way. He engaged in many visual, gestural, and physical reciprocal exchanges. He readily joined groups of peers playing in parallel. His social behavior was considered complex and his social competence high in level. He was particularly socially adept with turn taking and sharing things when an adult facilitated the activity.

Jason rarely was found in proximity to TD peers in the IRM classroom. Instead, he typically moved around the room solitarily, and played alone or alongside familiar peers. He spent a lot of time observing the TD peers in the room. On a few occasions, Jason smiled at a TD peer who greeted him by name and took his hand when the TD peer initiated it (evidencing his ability to respond to another's social bid), although these incidences were very brief. Jason usually did not sustain any reciprocal exchanges with TD peers after social bids such as these. There was no sharing of toys with TD peers, parallel play with TD peers, or imitation of their behavior under these circumstances. It was determined that in the IRM classroom Jason's complexity of social behavior declined.

The high level of social competence that Jason showed in the segregated classroom was also not apparent in the IPO

classroom. He tended to venture off by himself, and was more often found playing alone than engaging in parallel play with TD peers. He frequently did not notice TD peers in proximity to him in this environment, and therefore had little opportunity to engage in reciprocal exchanges with others. Jason was also not involved in any toy-related incidences of sharing, accepting, resisting/struggling, relinquishing, or offering/giving toy in relation to TD peers in the same manner that he readily participated in these behaviors with peers in the segregated context. His social behavior was markedly lower in the IRM classroom situation.

Jason once again showed a pattern of complex peer-directed social behaviors in the segregated classroom B, primarily involving toy-related instances such as sharing toys, struggling over toys, and giving and taking toys. He appeared to be able to extend social awareness to another individual as evidenced by his noticing that a child was upset about not having a toy. In response to this, Jason retrieved another toy and handed it to the peer. Sometimes he offered and gave up his own toy to the other child (peer) as a friendly gesture. This notably complex social skill, identified as a gesture of "offering/giving toy," indicated a high level of social competence.

Answers to Research Questions

The present study, while limited in the size of the sample studied, provides a detailed account of the social behavior of five toddlers with special needs in three classroom situations. The research questions are answered based on the data derived from the case studies:

1. What was the nature of the social behavior of toddlers with special needs toward other children who were in their segregated classrooms?

2. What was the nature of the social behavior of toddlers with special needs toward other children who were in their classrooms with integration by reverse mainstreaming?

3. What was the nature of the social behavior of toddlers with special needs toward other children who were in their classrooms with integration by pull-out?

The data suggest that as a group, the toddlers with special needs demonstrated a wide range of social behaviors toward other toddlers with special needs (peers) during the entry free play and free play periods of the segregated classrooms. The group also varied in levels of social competence. Characteristic social behavior patterns ranged from simple to complex, indicating that the subject group exhibited low to high levels of social competence. The most

consistent form, or most readily engaged in kind of social behavior by the group, was parallel play. The greatest variability was found to involve the kinds of social behavior that were either simple or complex. Hence, some members of the subject group demonstrated a greater tendency to play alone (solitary play), to be unoccupied, to fail to notice or respond to a peer, or to engage in stereotyped behaviors. Others were more likely to be in proximity to peers, to participate in reciprocal exchanges, or to share play things.

A tendency to watch or look at (observer behavior) typically developing peers was the predominating social behavioral characteristic in the classroom with integration by reverse mainstreaming (IRM). The range of social behaviors was much lower in the IRM classroom than in the others. The subjects were not frequently found in proximity to typically developing peers (TD peers), and therefore were less likely to encounter their new classmates, or to play with them. Since the subjects did not come into close contact with TD peers, they had little opportunity to engage in mid-level (parallel play) and complex forms of peer-directed social behavior. Even those individuals who tended to demonstrate complex forms of social behavior in the other situations toward peers and TD peers, showed very little of this behavior toward any classmate in the IRM classroom.

All subjects appeared to spend a lot of time observing of their new classmates (TD peers) in the entry free play situation of the IPO classroom. It seems that under these circumstances, the presence of the typically developing toddlers interrupted the subjects' typical social play patterns of engaging in a variety of peer-directed social behaviors and fostered little peer-directed social behavior.

A wide range of social behaviors from simple to complex was demonstrated by toddlers with special needs in the classroom with **integration by pull-out (IPO)**. Disparity was also found among the subject group with respect to social behavioral patterns evidenced in this situation. Low levels of social behavior typically included observer, unoccupied, and preoccupied behaviors, solitary play, and some stereotyped behaviors. Three of the subjects (Ricky, Aaron, and Justin) showed a predominance of these behaviors. Because these individuals did not readily approach or play alongside TD peers, these subjects did not have sufficient opportunity to engage in peer-directed social behavior. The social behavior patterns for these three individuals were remarkably simple in connection with integrating them into the regular classrooms of their TD peers (integration by pull-out). These results suggest that some of the members of the subject group of toddlers with special needs were less socially adept under these circumstances.

The remaining two subjects (Jaclyn and Marcie), who demonstrated high levels of social competence in the segregated situations, showed a similar behavior pattern in the classroom with integration by pull-out (IPO). They engaged in both simple and complex social behaviors including proximity to TD peers, onlooker behavior, parallel play, and reciprocal exchanges involving TD peers. A remarkable result under these circumstances for these individuals was imitation of TD peers, which represented a highly complex form of peer-directed social behavior. Since the only instances of imitation were found in relation to TD peers in the IPO classroom, these findings suggest that this environment supported opportunities for certain toddlers with special needs to engage in particularly complex peer-directed social behavior.

The subjects demonstrated unique patterns of social behavior and profiles of social behavioral adaptation in relation to playing in different classrooms composed of different peers (i.e., segregated classrooms containing only toddlers with special needs and integrated classrooms containing toddlers with and without special needs). Data pertaining to representative patterns of social behavior and profiles of social behavioral adaptation for each subject are also analyzed and reported:

Jaclyn

Jaclyn demonstrated relatively little difference in the levels of social competence she exhibited in the integrated and segregated classrooms. She was often found in proximity to peers and typically developing peers alike, with many opportunities for single and multiple reciprocal exchanges. In addition, she engaged in the complex form of peer-directed social behavior involving imitation, when provided the opportunity to play in the regular classroom of typically developing peers. She appeared to adapt to the availability of higher functioning children (TD peers) by reciprocating with higher functioning social behavior in the IPO classroom, as well as to manage well socially among her peers and TD peers in the segregated and IRM classrooms.

Ricky

Ricky, who was found to possess a low level of social competence in the segregated classrooms, demonstrated greater deficits in social skills toward other children, particularly toward typically developing peers in both integrated situations. For example, he exhibited more isolation, unoccupied, and onlooker behavior, and less proximity to and play alongside of (parallel play) typically developing peers in the integrated settings, as compared with more proximity to and parallel play in relation to

peers in the segregated classrooms. He was therefore more self-directed than peer-directed in his social behavior patterns when playing in integrated classrooms with typically developing peers. He also appeared to demonstrate an increase in stereotyped forms of self-directed behavior in the integrated situations, including movement of his body parts and whole body ("moving") and brushing himself with his hands ("touching"). These findings indicate that Ricky's appropriateness for the integration program was questionable.

Aaron

Although Aaron's level of social competence was fairly low in relation to peers in the segregated setting, some of his peer-directed behaviors in the classroom with integration by pull-out toward typically developing peers were aggressive in nature and possibly due to modelling negative behaviors of others within the classroom environment. Aaron's assaults on others (TD peers) were not incited by them. The precipitating factor appeared to be his watching an unrelated dispute between two TD peers, and although he was not involved in this situation, he replicated the aggressive behavior and attacked other TD peers in response. Aaron was not observed attacking classmates in the other classroom situations. Due to the

negative consequences that were attributed to the integrated classroom environment (IPO classroom), the appropriateness of integrating this particular subject in this way is questionable.

Marcie

The unique characteristic of Marcie was her demonstration of a slight increase in level of social behavioral competence toward typically developing peers in the integration classrooms, compared with peers in the segregated classrooms. Although capable of complex peer-directed social behavior, Marcie was seldom observed demonstrating these behaviors toward peers in the segregated situations, even after she settled into the program and no longer spent most of the time crying. She rarely observed her peers in the segregated classrooms for any length of time. On the other hand, in addition to watching her typically developing peers closely in the integrated situations, Marcie imitated their actions, and was involved in more visual, vocal, gestural, and physical reciprocal exchanges with her playmates without special needs (typically developing peers). She appeared to be developmentally appropriate for the integration programs.

Jason

Jason's behavior was presumed to be influenced by

having typically developing peers as playmates in the integrated classrooms since his social behavior was very different and less complex in these situations as compared to his social behavior exhibited in the segregated classrooms. The level of social competence Jason demonstrated in the integrated environments was lower since he spent more time playing alone or being unoccupied in these situations and evidenced very few reciprocal exchanges involving typically developing peers. In the segregated classrooms, Jason was much more socially engaging with his peers and appeared to possess a much higher level of social competence toward other toddlers with special needs. Although socially competent with peers, Jason had difficulty achieving this same level of social competence involving typically developing peers in integrated classrooms. Further monitoring of his progress was indicated based on these findings, to assess his appropriateness for continued integration.

Analyses of the data suggest that there was considerable variation in the occurrence of self-directed behavior for the subject group. Solitary play and unoccupied behavior were the self-directed behaviors most commonly evidenced by the subjects as a whole. Stereotyped mannerisms were unique to three of the five subjects. Two of the three children exhibiting the most frequent and

pronounced stereotyped behaviors (Aaron and Ricky), also demonstrated the lowest levels of social competence throughout all situations. The other child (Jaclyn) possessed stereotyped mannerisms, but showed a moderate to high level of social competence in all classrooms. From these findings and based on Field's (1980) assumptions, it appears that for some children, stereotyped behaviors may potentially be obstacles to opportunities for coming into contact with other children during free play situations and for engaging in peer-directed social behaviors.

CHAPTER 5

DISCUSSION AND IMPLICATIONS

The discussion addresses identified trends from information obtained in the case studies concerning patterns of social behavioral adaptation in relation to the contexts of segregated and integrated early intervention classrooms. Therapeutic implications and recommendations for occupational therapists are also discussed concerning developmentally appropriate, individualized intervention practices serving toddlers with special needs, including the efficacy of social integration.

Identified Trends

After compiling and analyzing the data in case studies that focused on the nature of the social behavior of five selected toddlers with special needs in the contexts of segregated and integrated classroom environments, the relationship between conditions of playmate exposure and social behavioral adaptation to these conditions became apparent. Trends were identified and used as the basis of discussion regarding the efficacy of employing integration as part of the early intervention programs for this age-group of individuals with special needs.

One trend identified was the inconsistency of social behavioral patterns in relation to the varying classroom

conditions. Note that the segregated classrooms were composed of toddlers with special needs and the integrated classrooms included toddlers with and without special needs. This finding indicated that adaptation to the availability of different playmates varied among the subject group.

The supposition derived from this phenomenon is that the presence of typically developing toddlers (TD peers) affected the social behavioral patterns of the individuals studied. While some subjects were more adept in the segregated classrooms in demonstrating complex peer-directed social behaviors toward other toddlers with special needs, other subjects showed a similar level of social competence or greater degree of complexity of peer-directed social behavior in relation to typically developing peers in the integrated settings. Conversely, two subjects were less inclined to direct social behaviors toward typically developing peers in the integrated settings, and showed a decline in social competence under these circumstances. These subjects also demonstrated stereotyped behaviors, but were observed directing social behaviors toward other toddlers with special needs. When typically developing peers were present, the repetitive behaviors increased and the occurrence of peer-directed social behavior was less apparent for these individuals.

This trend provided evidence that what was being demonstrated was markedly different patterns of adaptation to the conditions of the classrooms (segregated vs. integrated) and to the availability of playmates representing the subgroups of toddlers with special needs and toddlers without special needs. Unfamiliarity with the TD peers, variances in the classroom environments, and distinctive features of the programs may have contributed to these differences (Guralnick, 1981a). Nevertheless, evidence of changes in social behavior patterns and of an inclination by all subjects to spend a great deal of time watching typically developing peers play in the integrated classrooms, suggests that the aspect of their (the typically developing toddlers) playing "differently" had something to do with the variances of social behavior patterns across contexts.

The discrepancy among the subject group in ability to adapt in a positive manner to the availability of different playmates suggests that some toddlers with special needs may benefit from social integration or normalization practices in early intervention programs, and others may not. For instance, in Aaron's case, negative consequences may have resulted from his participation in an integrated classroom. Review of the video records provided evidence that Aaron's only demonstration of aggressive behavior toward other

children was in the integrated setting (IPO classroom) in relation to typically developing peers. The findings suggest that Aaron was modelling the negative social behavior of his new playmates, the typically developing toddlers. Whereas the children who engaged in the negative behavior that Aaron modelled were able to settle their grievance quickly, Aaron demonstrated little control over his behavior and repetitively accosted other innocent playmates. It is not known whether early intercession by an adult could have interrupted this negative behavioral pattern in this case. Although this occurrence of modelling of negative behaviors is incidental and the interpretation is preliminary, the incident demonstrates that integration may not always be effective or appropriate for every child with special needs. The argument is presented that without proper monitoring or intervention by an adult for situations such as these, the availability of typically developing playmates may have potentially deleterious effects rather than benefits for some children.

In another case, the availability of children without special needs appeared to promote social competence. Based on the findings that indicate that Marcie demonstrated a higher level of social competence toward typically developing peers in the classroom with integration by pull-out than toward peers in the segregated situations, it is

possible that Marcie may have been responding to the higher level of social competence of typically developing children in the integrated environment (Guralnick & Groom, 1987a). Her behavior was quite possibly a demonstration of peer-modelling of positive social behavior.

The positive results in Marcie's case support the efficacy of integration for certain individuals with special needs. Because both supporting and opposing evidence was found concerning the benefits of varied peer-group exposure, it is highly recommended that assessment of an exceptional child's unique social pattern of adaptation to the challenges of being integrated with different playmates, is vital to securing the most desirable early intervention program for the child.

The different ways in which young children with special needs are placed together with typically developing children must also be taken into consideration. The differences in the social behavioral patterns observed between the contexts of the two integrated classrooms demonstrate that the conditions of being pulled out of their segregated environment and placed together with typically developing peers in regular classrooms, and of integrating typically developing toddlers in the special classrooms with toddlers with special needs, must be taken into account when

assessing the special needs of the child and when determining the appropriateness of the integration program.

Much of the literature has overlooked the toddler age-group of children with special needs for consideration of integration consequences. These trends also suggest that toddlers with special needs are sensitive to their social environment and to their playmates. Consideration of the therapeutic implications of integration practices seems fitting for exceptional young children of the toddler-age group, who receive early intervention and occupational therapy services.

Therapeutic Implications and Recommendations

Therapeutic implications and recommendations that result from this study have common themes with what researchers have identified over the past 15 years as necessary for supported social integration of young children with special needs (Apolloni & Cooke, 1978; Guralnick, 1992; Peterson, 1982). Therapeutic intervention is apt to be required for toddlers with special needs to socially benefit from experience with other playmates. Occupational therapists who provide center-based early intervention services cannot simply place young children with and without special needs together in a therapeutic setting, and expect the children targeted for early intervention to benefit

without a clear therapeutic plan. Careful collaboration among occupational therapists, special education, and regular education teachers is necessary to ensure the most suitable placement of the child and developmentally appropriate support for social integration.

It is important to consider carefully whether the child will potentially benefit from an integrated program. Findings from this study have indicated that not all integration situations are developmentally appropriate for every toddler with special needs. Occupational therapists should make a clinical assessment of whether social integration is therapeutically indicated for individual toddlers with special needs. This decision should involve consideration of the child's level of social competence and social adaptive ability with different playmates and under different conditions. Some of the findings of this study have indicated that toddlers vary in their response to the condition of being placed together with other children without special needs. Individual assessment of social behavior in the contexts of segregated and integrated classroom situations is warranted prior to deciding on the most suitable environment for the realization of optimal development and social adaptive functioning for each toddler with special needs.

Therapeutic support for social integration is required when a child is placed in an integrated program. Peterson (1982) recommended that early intervention professionals incorporate methods to encourage positive social interaction between children in the integrated environment. The occupational therapist's role as part of the early intervention team includes identifying conditions and procedures of adult intervention that promote the development of social skills by facilitating opportunities for peer-directed social behaviors. Further research is needed to address this concern.

Positive role modelling is a potential therapeutic tool in integration practices. An underlying part of the therapeutic plan is that typically developing peers will serve as appropriate role models such that positive social behaviors will be imitated by the targeted children with special needs. The effect of the presence of typically developing peers on the behavior of toddlers with special needs through imitation was identified in this study in three cases. For two individuals, Marcie and Jaclyn, the results were positive. These toddlers with special needs imitated the dramatic play of their typically developing peers because of opportunities to observe more complex forms of social play in an integrated classroom. The results were negative for another subject, Aaron, who was incited to

replicate the aggressive behaviors of typically developing playmates in the same environment. Clearly, the issue for occupational therapists is how to promote role modelling of positive behaviors and avoid imitation of negative ones. Research has indicated that peer preferences more than the availability of playmates affect children's choice of who they imitate (Guralnick & Groom, 1987; Peterson, 1982). Occupational therapists can determine which children with special needs are likely to benefit from positive role modelling and those who are at risk for negative consequences in the company of more socially accelerated peers.

Researchers have also described that when attending to social integration program development, what must also be considered is the impact of physical, spatial, and organizational features of the settings on social behavior (Guralnick, 1978; Hanson & Hanline, 1989; Peterson, 1982). "Social integration may be affected by a variety of physical and social conditions that promote or hamper chances that these two groups (handicapped and nonhandicapped) of youngsters will seek out each other for play" (Peterson, 1982, p. 69). Some factors that may impact the outcomes and nature of social behavior in integrated programs are (a) the availability and distribution of resources, (b) the type of intervention models employed, and (c) the developmental

levels and related social-personal characteristics of the children (Guralnick, 1978). Occupational therapists may be responsible for the physical, spatial, and organizational accommodations that are necessary for realization of the most positive social intervention outcomes.

Summary

The potential for creating positive social behavioral opportunities in integrated settings exists, since it is commonly recognized that integration allows for more diversity of actions, variations in behavior, opportunities for modelling, and a richer environment for children who lack social competence (Odom, et al., 1992). Integration of a young child with special needs must be carefully monitored by professionals since, as this study has shown, not every child with special needs may benefit from integrating with typically developing peers. Occupational therapists have a role in the planning aspect of integration, in the individual assessment of special needs as part of the decision of whether to allow a child to integrate or not, and in providing developmentally appropriate intervention practices. They are challenged to create the best therapeutic plan for promoting optimal social development and social adaptive functioning, and for preventing additional complications and possible secondary delays in

the young children served in early intervention. This study was a preliminary investigation providing information that suggested some of these needs. Further research is needed to offer additional information that addresses these pertinent issues.

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APPENDIX A
APPROVAL FOR HUMAN SUBJECTS' RESEARCH



A campus of The California State University

Office of the Academic Vice President • Associate Academic Vice President • Graduate Studies and Research
One Washington Square • San Jose, California 95192-0025 • 408/924-2480

To: Carolyn Clayton
42648 Fontinebleau Pk.
Fremont, CA 94538

From: Serena W. Stanford *Serena W. Stanford*
AAVP, Graduate Studies and Research

Date: March 16, 1993

The Human Subjects-Institutional Review Board has approved your request to use human subjects in the study entitled:

"The Social Behavior of Toddlers with
Developmental Special Needs: A Comparison in
Segregated and Integrated Early Intervention
Classrooms"

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to any and all data that may be collected from the subjects. The Board's approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Dr. Serena Stanford immediately. Injury includes but is not limited to bodily harm, psychological trauma and release of potentially damaging personal information.

Please also be advised that each subject needs to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate or withdrawal will not affect any services the subject is receiving or will receive at the institution in which the research is being conducted.

If you have questions, please contact me at 408-924-2480.

CC: Lela Llorens

APPENDIX B

**SAMPLE COVER LETTER TO PARENTS OF CHILDREN AS PROSPECTIVE
SUBJECTS AND SAMPLE CONSENT FORM FOR MINORS**



College of Applied Sciences and Arts • Department of Occupational Therapy
One Washington Square • San José, California 95192-0059
Main Office: 408/924-3070 • Fieldwork Office: 408/924-3078 • FAX: 408/924-3088

SAMPLE COVER LETTER TO PARENTS OF CHILDREN AS PROSPECTIVE SUBJECTS

Date

Dear Parent(s) or Guardian(s) of _____ (name of child) _____,

I am conducting a research study as partial fulfillment of the requirements of the degree Master of Science in Occupational Therapy at San Jose State University. The research involves audio/video taping of classroom activity for the period March 22, 1993 - July 3, 1993. The study's content will be an investigation of the social behavior of toddlers in educational settings. I would like to tape your child's behavior directly while he/she is in attendance at [name of the center] for the inclusive dates of the study. The information obtained from these records will be used for educational purposes only. Confidentiality will be secured for you and your child.

The educational center which your child attends has given permission for this investigator to conduct research during regular classroom activity. A copy of the agency's written consent has been included for your records.

To grant permission for your child to engage in this study, please complete the attached Agreement to Participate in Research form (2 pages) and the Signature Form for Research Involving Children or Wards, and return the forms in the enclosed envelope. Notification of your child's acceptance and copies of the consent and signature forms will be sent back to you.

Sincerely,

Carolyn Clayton
Responsible Investigator



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SAMPLE CONSENT FORM FOR MINORS

AGREEMENT TO PARTICIPATE IN RESEARCH

Responsible Investigator: Carolyn Clayton
Title of Protocol: The Social Behavior of Toddlers with
Special Needs: A Comparison in Segregated and Integrated
Early Intervention Classrooms.

1. My child has been asked to participate in a research study investigating the social behavior of toddlers in educational centers.
2. My child, who will be attending (center's name), will participate in his/her daily schedule of activities as usual. The investigator responsible for the study will be audio/video taping my child for various times during the period March 22, 1993 - July 3, 1993. The video records of my child will be used for educational purposes only.
3. The research will involve no foreseeable risk to my child since no intrusion upon my child's behavior will occur.
4. The use of this study for educational purposes may benefit my child as a recipient of early intervention services.
5. The results of this study may be published, but no information that could identify my child will be included. Since detailed description of my child's behavior will be necessary, a fictitious first name will be used in association with the data.

Parent's Initials

Date



College of Applied Sciences and Arts • Department of Occupational Therapy
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6. Any questions regarding the research may be addressed to the responsible investigator: Carolyn Clayton [contact information supplied]. Complaints about the research may be presented to the Occupational Therapy Department Chairperson: Lela A. Llorens, Ph.D., OTR, FAOTA [phone number supplied]. Questions or complaints about research subjects' rights, or research-related injury may be presented to Serena Stanford, Ph.D., Associate Vice President of Graduate Studies and Research [phone number supplied].

7. No service of any kind to which my child is otherwise entitled, will be lost or jeopardized if I choose not to allow my child to participate in the study.

8. I give consent for my child voluntarily, with the understanding that I may refuse to allow my child to participate in the study. By choosing to allow him/her to participate, I understand that I may withdraw my child at any time without prejudice to my child's relations with San Jose State University or the educational center.

9. A signed and dated copy of the consent form will be provided me.

Name of the child _____

*The signature of a parent or guardian of the above named child on this document indicates that permission is given for the child to participate in this study.

*The signature of the researcher on this document indicates agreement to include the above named subject in the research and attestation that the minor's parent or guardian has been fully informed of his or her rights.

 Parent's/Guardian's Signature

 Date

 Investigator's Signature

 Date

APPENDIX C

**SAMPLE LETTER NOTIFYING PARENT THAT CHILD HAS NOT
BEEN SELECTED AS A SUBJECT**



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**SAMPLE LETTER NOTIFYING PARENT THAT CHILD HAS NOT BEEN
SELECTED AS A SUBJECT**

Date

Dear Parent(s) or Guardian(s) of _____ (name of child) _____,

Thank you for your interest in your child's participation in the social behavior study. The quota of research subjects has been filled and your child's participation is not needed at this time. The consent forms you submitted are enclosed and nullified.

Your interest is sincerely appreciated.

Sincerely,

Carolyn Clayton
Responsible Investigator

APPENDIX D

**SAMPLE LETTER TO PARENT WITH NOTIFICATION THAT
CHILD HAS BEEN SELECTED AS A SUBJECT**



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**SAMPLE LETTER TO PARENT WITH NOTIFICATION THAT CHILD HAS
BEEN SELECTED AS A SUBJECT**

Date

Dear Parent(s) or Guardian(s) of _____ (name of child) _____,

Thank you for your consent for your child's participation in the study of toddlers' social interactions. Enclosed please find copies of your **Agreement to Participate in Research and Signature Form for Research Involving Children or Wards.**

I hope that valuable information will be obtained as a result of this investigation for application in establishing early intervention strategies and for promoting positive peer relations in the classroom. Please feel free to contact me or any of the responsible parties stated on your agreement, regarding questions or concerns.

Sincerely,

Carolyn Clayton
Responsible Investigator

APPENDIX E
SAMPLE LETTER TO PARENTS OF CHILDREN WHO MAY APPEAR
IN VIDEO TAPING OF CLASSROOM ACTIVITY



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**SAMPLE LETTER TO PARENTS OF CHILDREN WHO MAY APPEAR IN VIDEO
TAPING OF CLASSROOM ACTIVITY**

Date

Dear Parent,

I am conducting a research study as partial fulfillment of the requirements for the degree Master of Science in Occupational Therapy at San Jose State University. The research involves audio/video taping of classroom activity in order to discern social behavior of children who attend [educational center indicated] and are participating in the integration program. The period of audio/video taping will be from March 22, 1993 - July 3, 1993.

Your child may be present in the classroom during this video taping, which will be used for educational purposes only. The research will involve no foreseeable risk to your child since no intrusion upon his/her behavior will occur.

If you have any question regarding the study please contact the responsible investigator [contact information supplied] or program director of the early intervention center [name and contact information supplied].

Sincerely,

Carolyn Clayton
Responsible Investigator